7-1-1954

North Central South Dakota Farm Record Summary 1953 Eleventh Annual Report

Allen R. Clark

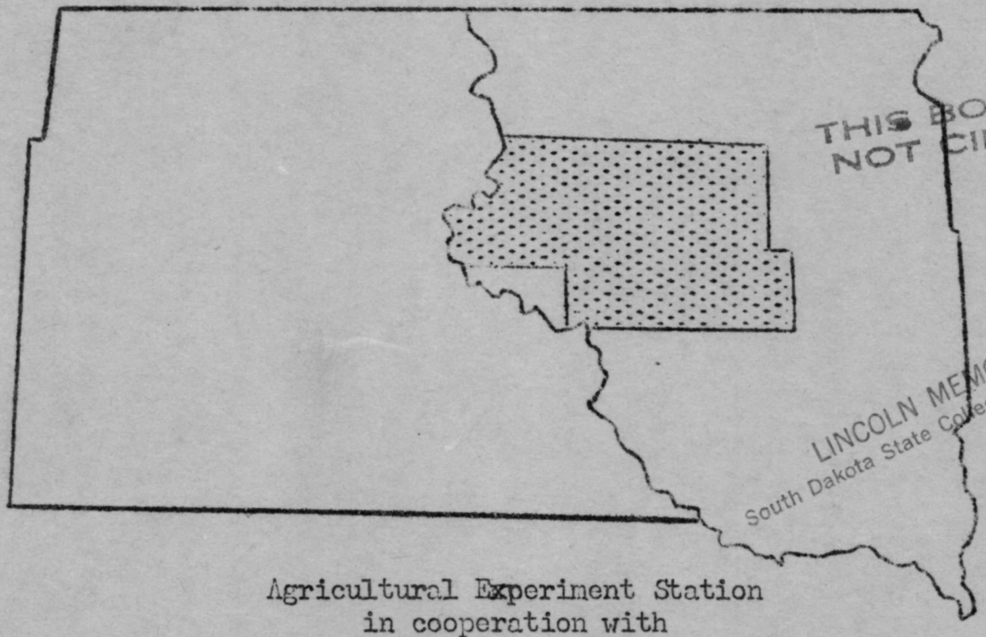
1953

ELEVENTH ANNUAL REPORT

NORTH CENTRAL SOUTH DAKOTA

farm record summary

Agricultural Economics Pamphlet No. 53



Agricultural Experiment Station
in cooperation with
Agricultural Extension Service
South Dakota State College
College Station, South Dakota
1954

Table of Contents

About this Report

This is the eleventh annual report of the farm record study in North Central South Dakota which was started by the experiment station in 1943. This report includes farm records from the following counties: Hand, Hyde, Sully, Faulk, Potter, and the western edge of Beadle and Spink.

Farmers cooperating in the study kept records of their farm receipts and expenses, beginning and ending inventories, crop and livestock production, and farm produce used in the household. Some supplemental information on management practices, crop varieties, family and hired labor, is gathered when the books are closed at the end of the year.

ELEVENTH ANNUAL REPORT OF NORTH CENTRAL SOUTH DAKOTA RECORDS PROJECT, 1953

Prepared by Allen R. Clark

Farm Earnings Extremely Variable in 1953

In 1953 we saw the most intensive earnings squeeze of the last several years. In comparing the 1953 returns to operators labor we find the average, for the 53 farms reporting, to be $-2939.00. The twelve high return farms averaged $3927.00 for their labor and the twelve low averaged $-9932.00. The operators labor earnings include credit given for eggs, milk, meat and other farm supplies used by the family during the year. It also includes the expense for food for hired labor, a charge for family labor, and a charge of 5 percent interest on land, buildings, machinery and livestock investments. If the farmer owned all his land, he received some of this as rent. In most cases, he received the interest on his machinery investment as income; however, some farmers would have to pay interest on practically all of the investment.

Climatic Conditions

1953 looks like a wonderful growing year as we look back at it. The rainfall was 6.17 inches above normal and the temperature average was above normal. It was a wonderful year for rust also. From March to July, the temperature was below or near normal and the moisture was considerable above normal. Some hail was experienced. With above normal rainfall, much difficulty was experienced in planting crops; however, frost was later than average and a fair corn crop developed. Small grains were plagued by rust and wet weather at harvest time.

Variations in Earnings

The farmers showing most profit in 1953 had more Dairy cattle, nine compared with four for all farms and one for the group showing least profit. The high income group had more litters of pigs and more pigs per litter also a much higher number of pigs weaned than average on the low group. The high income group also had more Beef cows and less feeders than either the average group or the low income group. The most striking difference in cropping pattern is seen in percent of farm land in hay and pasture. Here the high income group has 36 percent of their farms in hay and pasture against 5 percent in the low income group and 20 percent in the total average. This again points out the necessity of having a well balanced rotation over the long pull.

The long time picture indicates a large premium going to the efficient manager. To be successful a farmer must grow a product the consumer wants and produce it efficiently. Farm costs continued high or are climbing. Prices received for farm products continued steady to downward.

1952-1953 CROPYEAR WEATHER INFORMATION

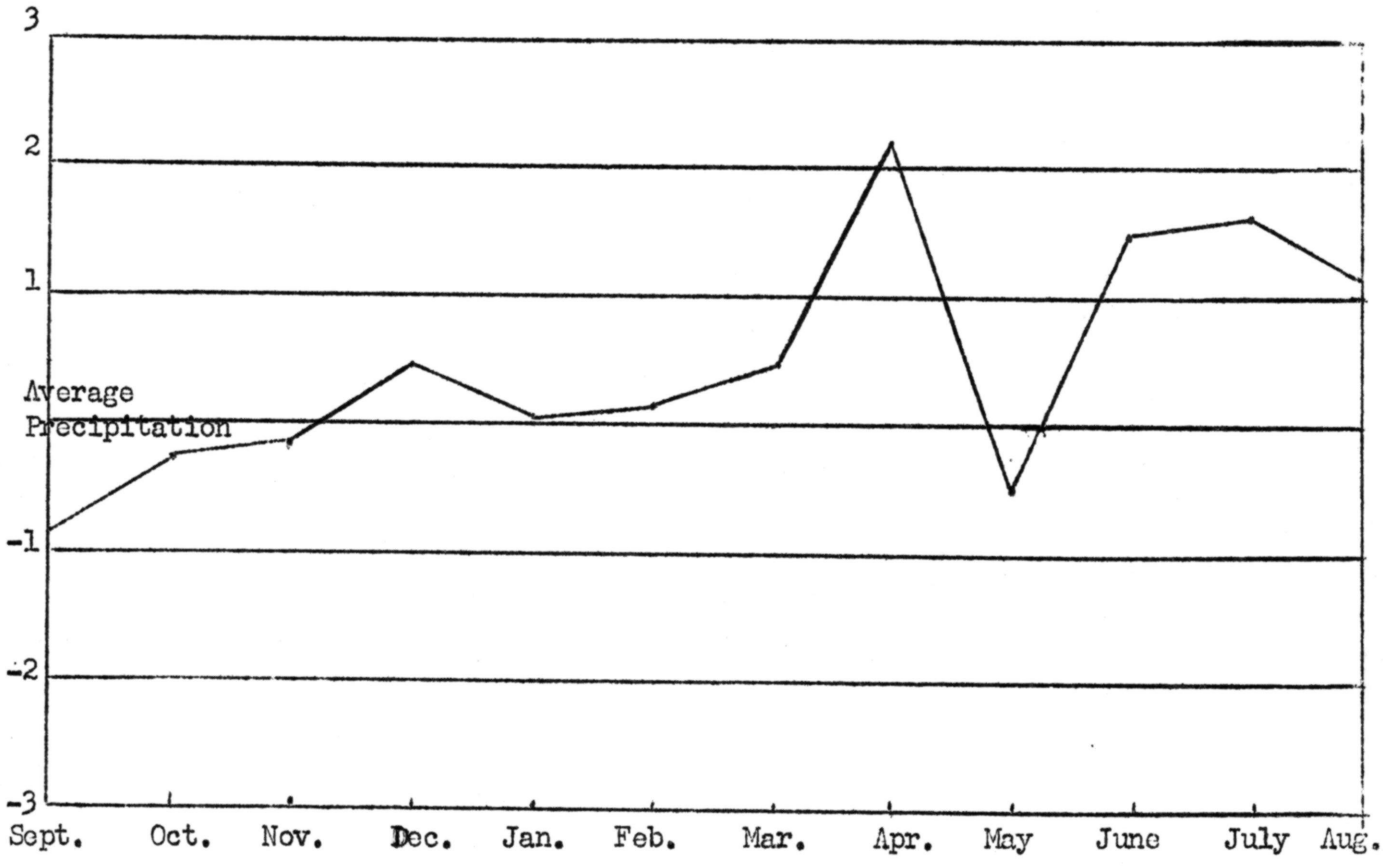


Chart 1. Normal vs. 1952-1953 Crop Year precipitation in North Central South Dakota. (Average of Faulkton, Gettysburg and Miller precipitation reports.)

Definition of Terms and Measures Used

1. Operator's labor earnings - is the measure of financial success used in this report. It is a measure of the relative financial success of a farmer and represents the returns for his year's work (including family living from the farm), above all farm expenses, and a deduction for the value of unpaid family labor and an interest charge for the use of farm capital.

2. Productive man work units - is a measure of size of business used in this report. A work unit represents the amount of work that a farm worker can do in a 10-hour day working at average efficiency. For example, it requires about 10 hours of man labor to produce an acre of corn and 130 hours to care for a milk cow for a year. Thus, an acre of corn would represent 1 work unit and a milk cow 13 work units.

The work unit standards used in this report are shown in the following table:

Table 1

Crops			Livestock		
Item	Per	No. of Work Units	Item	Per	No. of Work Units
Corn, grain	acre	.9	Dual purpose cows	cow	10.0
Corn, hogged off	acre	.6	Milk cows	cow	13.0
Corn and cane silage	"	1.4	Other dairy cattle	animal unit	4.0
Corn and cane fodder	"	.9	Beef cows	cow	3.0
Sorghum	"	.9	Other beef cattle	animal unit	3.0
Potatoes	"	4.0	Bulls	head	3.0
Small grain	"	.5	Litter	litter	4.0
Alfalfa hay	"	.8	Other hogs	head	.5
Other tame hay	"	.7	Ewes	"	.5
Wild hay	"	.4	Other sheep	"	.2
Animal pasture	"	.3	Hens	100	20.0
			Chickens raised	100	4.0

3. Work units per worker - is a measure of the efficient use of labor on a farm.

4. Livestock increase - is a value of gross livestock sales less purchase and plus or minus changes in inventory values of livestock from the beginning to the end of the year.

5. Crop yield index - is a comparison of the yield per acre of all crops on a given farm or group of farms with the average yield of all crops for the entire group of farms studied. For example, a farm with a crop yield index of 105 means the average yield for this farm is 5 percent greater than the average.

6. Crop selection index - is a measure of the success of a farmer or group of farmers in choosing high value crops. Crops were rated as A, B, C, and D. All of the acres in A crops, one-half of the acres in B crops, and one-fourth of acres in C crops were used in calculating the percent of cropland in high return crops. The group average was then considered 100 with variations compared to this average. The following crops were rated as A crops: alfalfa, wheat, oats, and barley. The following were rated as B crops: corn grain, corn and cane forage and flax. C crops were sorghum for grain, millet, rye, sweet clover, mixed legume, and all annual hay and pasture. All other crops were rated as D.

7. Livestock returns per $100 feed fed - is a measure of the efficiency in converting feed into livestock products. It is obtained by dividing the value of the net livestock increase by the value of feed fed to all productive livestock during the year. This figure is multiplied by 100.

8. Part-owner - is a farmer or rancher who owns part of the land he operates and rents the rest.

Table 2, Summary of Farm Inventories, 1953 *

Item	Your farm	Average of 53 farms	12 most profitable farms	12 least profitable farms
Beginning of Year				
Productive livestock(total)	$_____	20,571	36,977	10,185
Cattle	_____	15,966	29,353	8,734
Hogs	_____	1,500	2,091	597
Sheep	_____	2,945	5,321	768
Poultry	_____	160	212	86
Feed and seed	_____	6,425	7,850	4,772
Mach. and equipment(total)	_____	8,423	11,772	6,581
Power machinery	_____	4,186	6,071	2,854
Crop and gen. machinery	_____	4,043	5,447	3,565
Livestock equipment	_____	194	254	162
Improvements (farm) **	_____	3,998	6,155	2,383
Land	_____	12,080	18,429	8,710
Total farm capital	_____	46,053	71,703	27,719
End of year				
Productive livestock(total)	_____	14,604	15,300	4,375
Cattle	_____	10,951	18,891	3,542
Hogs	_____	1,477	2,775	386
Sheep	_____	2,018	3,668	942
Poultry	_____	158	277	62
Feed and seed	_____	8,312	16,121	3,470
Mach. and equipment(total)	_____	7,971	14,954	2,750
Power machinery	_____	4,112	8,287	1,248
Crop and gen. machinery	_____	3,500	6,063	1,316
Livestock equipment	_____	359	604	150
Improvements (farm) **	_____	4,423	7,543	2,210
Land	_____	15,116	23,240	9,183
Total farm capital	_____	46,850	65,283	23,662

* The summaries of farm earnings and inventories were prepared as though the operators were all full owners. This has been done in order to more nearly compare all farmers on an equal basis.

** Does not include value of dwelling.

Table 3. Crop Acreage Summary, 1953

Item	Your farm	Average of 53 farms	12 most profitable farms	12 least profitable farms
Corn for grain	_____	104	170	39
Sorghum forage	_____	33	50	17
Corn and cane silage	_____	45	58	46
Total Row Crops	_____	126	207	57
Wheat	_____	183	317	42
Oats	_____	105	179	40
Barley	_____	57	64	52
Rye Grain	_____	57	0	70
Flax	_____	47	60	35
Miscellaneous	_____	29	0	0
Total Small Grain	_____	257	468	115
Alfalfa hay	_____	76	143	24
Other tame hay	_____	126	159	54
Total Tame Hay	_____	202	197	28
Idle and Fallow	_____	98	116	86
Native Hay	_____	391	847	92
Native Pasture	_____	647	1,199	176
Total Acres Operated	_____	1,547	2,621	702
% of farm in cropland	_____	40	63	17
% of cropland in row crops	_____	28	40	17
% of cropland in sm. grain	_____	49	65	31
% of cropland in hay & past.	_____	20	36	5

Table 4. Crop Yield Summary, 1953

Item	Your farm	Average of 53 farms	12 most profitable farms	12 least profitable farms
Corn for grain	_____	30.	39.3	29.9
Wheat	_____	10.	15.5	6.
Oats	_____	28.	37.8	18.7
Alfalfa hay	_____	2.0	2.8	1.3
Other tame hay	_____	.8	1.2	.8
Corn & sorghum forage	_____	5.0	5.0	3.0

Table 5. Livestock Summary, 1953

Item	Your farm	Average of 53 farms	12 most profitable farms	12 least profitable farms
Horses	_____	4	4	3
Beef cows	_____	59	103	25
Milk cows	_____	4	9	1
Bulls	_____	3	6	1
Ewes	_____	105	157	72
Other sheep	_____	103	112	3
Litters of pigs	_____	11	17	5
Hens and pullets	_____	147	273	56
Total units prod. livestock*	_____	99	160	46

* A unit of productive livestock is equal to one mature cow, 2 yearlings, 7 sheep, 14 lambs, 5 sows, 10 pigs or 100 hens.

Table 6. Summary of Farm Earnings, 1953

Item	Your farm	Average of 53 farms	12 most profitable farms	12 least profitable farms
CASH FARM RECEIPTS				
Hogs	_____	2591	4880	588
Cattle	_____	5384	10368	1749
Dairy products	_____	352	709	69
Eggs	_____	508	1104	120
Poultry	_____	123	107	138
Sheep and wool	_____	1388	2143	943
Crops	_____	4484	8397	1189
Farm program payments	_____	227	428	59
Income from work off farm	_____	281	498	77
Miscellaneous	_____	350	299	428
TOTAL CASH SALES	_____	15688	28933	5360

Table 6 (cont'd)

Item	Your Farm	Average of 53 farms	12 most profitable farms	12 least profitable farms
CASH FARM EXPENSES				
Auto	_____	168	303	69
Power, mach., etc. (upkeep)	_____	989	1990	383
Farm improvement (upkeep)	_____	1664	3070	471
Hired labor	_____	863	1919	93
Crop expenses	_____	515	1128	116
Feed bought	_____	889	2715	185
Livestock expenses	_____	202	422	44
Taxes	_____	926	1939	382
Insurance	_____	315	658	95
TOTAL CASH EXPENSES	_____	17,878	27,298	9,407
NET CASH INCOME	_____	-3,026	5,759	-11,893

Net Cash Income must be adjusted by the inventory change and also by other business income and expenses. Then this total shows the farmer his returns for capital invested in the business and for the family labor -- or what is commonly known as net business gain. From this, a charge for family labor and interest are deducted to get the operator's labor earnings. This is shown on the following page.

Table 7. Summary of Farm Earnings with Inventory, 1953

Selected Item	Your farm	Average of 53 farms	12 most profitable farms	12 least profitable farms
NET CASH INCOME	$_____	-3,026	5,759	-11,893
Less:				
Capital Purchases:				
Power, mach. & equip.	$_____	1,664	3,070	471
Farm improvement	$_____	4,423	7,543	2,210
Livestock bought	$_____	638	1,549	145
Board furnished hired labor	$_____	264	675	95
Plus:				
Family living from farm	$_____	679	1,072	339
Inventory Change (Due to actual change)	$_____	7,313	3,300	-1,785
RETURNS TO CAPITAL & FAMILY LABOR (Net business gain)	$_____	245	7,920	-7,789
Less:				
Unpaid family labor	$_____	925	1,670	438
Interest in farm capital	$_____	2,347	3,666	1,195
OPERATOR'S LABOR EARNINGS	$_____	-2,939	3,927	-9,932

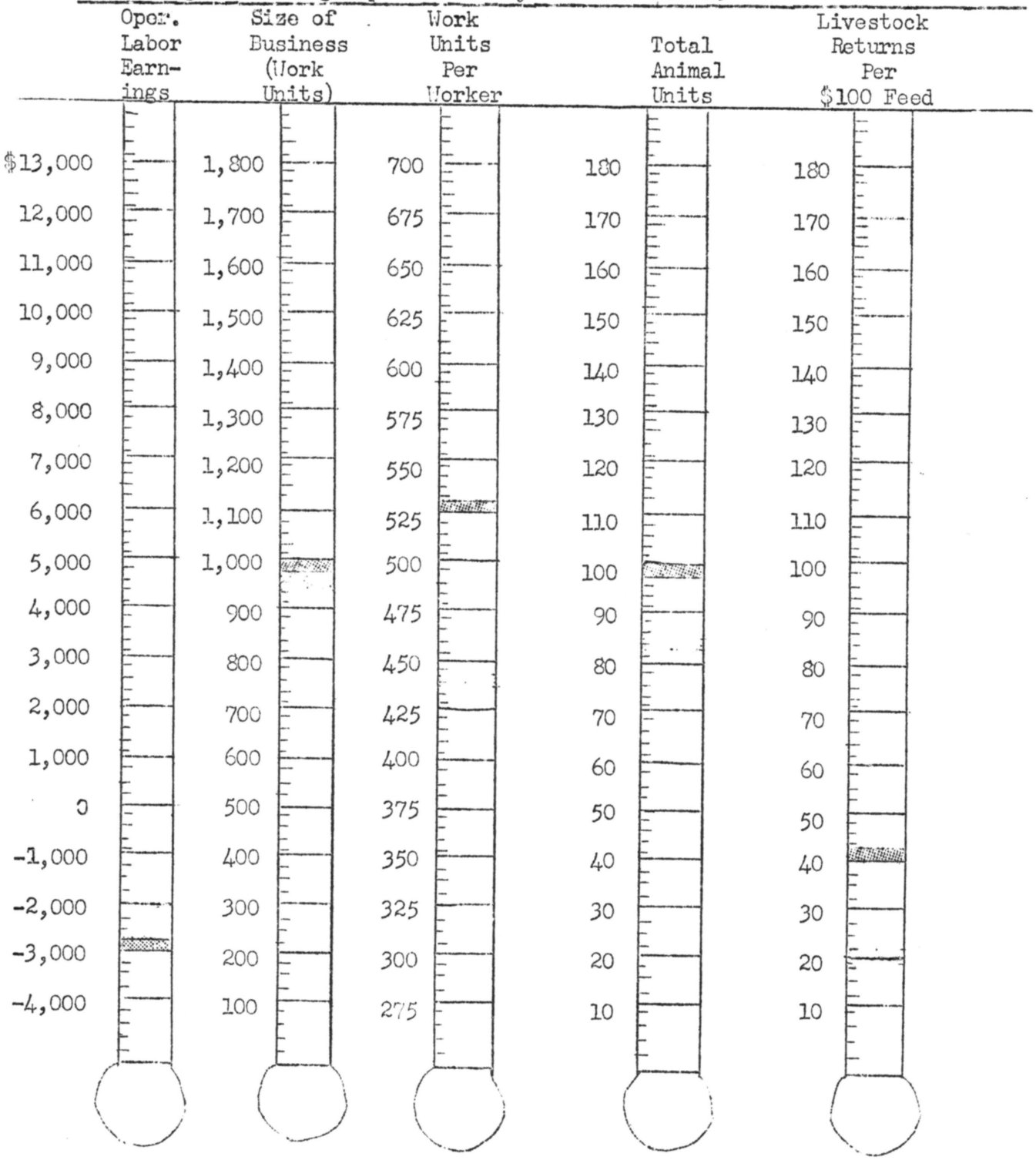
Table 8. Farm Organization and Management Efficiency Factors, 1953

Item	Your farm	Average of 53 farms	12 most profitable farms	12 least profitable farms
*Operator's Labor Earnings	$_____	-2,939	3,927	-9,932
Total acres operated	_____	1,544	2,621	1,702
Capital Investment				
Total capital managed	$_____	46,850	65,283	23,662
Productive livestock	$_____	14,604	25,300	4,378
Power and machinery	$_____	7,612	14,350	2,564
Rate Earned in investment	_____	-1.3	.9	-3.8
Size of Business				
*Work units (total)	_____	995	1,618	545
On crops	_____	611	1,107	295
On livestock	_____	372	540	211
Labor Utilization				
Number of workers	_____	1.9	2.5	1.3
*Work units per worker	_____	526	782	339
Crop acres per worker	_____	282	474	117
Animal units per worker	_____	52	63	40
Livestock increase per worker	$_____	154	3,656	-3,095
Crop Organization and Efficiency				
Total acres in crops	_____	523	887	219
% Cropland is of farm	_____	40	63	17
% Cropland in row crops	_____	28	40	17
% Cropland in small grain	_____	44	65	31
% Cropland in hay & pasture	_____	20	36	5
Livestock Org. & Efficiency				
Number of beef cows	_____	59	103	25
Number of milk cows	_____	4	9	1
Number of ewes	_____	10	10	2
Number of litters of pigs	_____	11	17	5
Number of hens	_____	147	273	56
*Total productive livestock units	_____	99	160	46
*Livestock returns per $100 feed	_____	43	139	-103
Pigs saved per litter	_____	8	8	7

* Measures used in thermometer chart on page 11.

THERMOMETER CHART

Compare your farm with others in your area on each of the factor thermometers. The average for the group is shown by the dark lines.



Summary of Information Shown in the North Central Farm Records

Now is the time to watch farm expenditures. Don't spend a dollar unless you are quite certain that it will return more than a dollar. Plan your farm business carefully. Time spent preparing budgets of possible farming operations may well be the most profitable time spent in your farming operations.

New machinery is still high priced. Some dealers are repossessing some machinery and may have "good buys" and so it pays to shop around.

The farmers who were in the high income group made good use of labor. Without exception the high income group had large numbers of livestock per man and high work units in crops per man, making a high work unit per worker load.

You should consider rust resistance, varieties of small grains where possible. In times of rising cost and "steady to lower" prices it is more desirable than ever to plant only recommended varieties and to use only the kinds and amounts of commercial fertilizers that pay.

In the farm visits we found the high income of farmers had culled their flocks and herds closely and were planning to continue close culling.

This is a poor time to have slow gaining cattle or shy breeding cows. The same is true of other types of livestock.

Good farm records take time each day. The time spent on records pays about $5.00 per hour according to an Illinois study. How many of your farm enterprises pay as well?

Keys to Profit

1. A large enough farm to employ your labor and management.
2. An efficiently run farm. Every dollar spent returning more than a dollar.
3. Best adapted crops. Both best varieties and the crops that will yield

a high return per acre. In this area wheat, alfalfa, and corn or grain sorghums are hard to beat.

4. Carefully planned and wisely used labor.
5. Balanced feeding program for livestock using as much home grown feed as possible.
6. Last but not least a carefully kept farm record book to tell you which enterprises made money and which lost money.

Selected List of Agricultural Economics Pamphlets in Print

July 1954

Pamphlet No.		
P 24a	**Types of Farming** Manual. C. R. Hoglund	December 1947
P 31	Financing Farm Land Sales in South Dakota. Gabriel Lundy and Ray F. Pengra	April 1951
P 32	Resales of Farm Land in South Dakota. Gabriel Lundy and Ray F. Pengra	May 1951
P 35	How Much Do Farmers Pay for Custom Work? J. Harvey Glover	June 1951
P 36	Father-Son Farm Partnerships. Russell L. Berry	June 1951
P 37	Agr. Prod. Capacity S. D. 1955 (Committee Report)	November 1951
P 39	Estimated Feed Requirements for Livestock and Poultry Sigurd Stangeland	May 1952
P 40	Labor Inputs for Livestock Enterprises. Sigurd Stangeland	September 1952
P 41	Summary of Water Law Principles and Basic Suggestions for Revising the South Dakota Water Laws. Kenneth Raschke and Kris Kristjanson	October 1952
P 43	Farm Labor, Power and Machinery Performance for Selected Operations Under Dryland and Irrigated Conditions in Central S. D. James Ulvilden. Rev.	August 1953
P 46	Some Local Impacts of Reservoirs in South Dakota	June 1953
P 47	Achieving Farm Ownership in S. D. Through the Farm Ownership Program of the Farmers Home Administration. Canute M. Johnson	July 1953
P 49	Farm Land Market Trends in South Dakota 1941-1952. Ray F. Pengra and Gabriel Lundy	December 1953
P 50	Agricultural Production Trends in S. D. - Farm Output Robert J. Antonides	January 1954
P 51	Base Prices for Long-Term Budgets in S. D.	February 1954
P 52	Farm Market Trends in S. D. 1941-1953	June 1954